EPA Region 10 TMDL Review Checklist			
State/Tribe: Washington §303(d) Segment(s): see attached list Pollutant(s): Fecal coliform bacteria, temperature, turbidity/sediment (TSS)		Date of Submittal: June 25, 2009 Date Received by EPA: June 29, 2009 EPA Reviewer: David Ragsdale	
Review Element	Required	Included (check if yes)	Recommendations/Comments
Submittal Letter	Yes	X	
Scope of TMDL	Yes	X	Addresses temperature, fecal coliform bacteria and turbidity impairment to waters within Hangman (Latah) Creek watershed. The submittal also addresses sediment impairment but Ecology did not request TMDL approval for TSS. Instead, Ecology proposed to use the analyses as a basis for not listing sediment on the next 303(d) list. See memo to file from David Ragsdale regarding EPA approval of TMDLs for TSS. Reviewer recommends EPA also approve TMDLs for sediment in Hangman Creek watershed.
Applicable Water Quality Standards & Numeric Targets*	Yes	X	
Loading Capacity*	Yes	X	Loading capacity is identified in the state's analyses for each of the pollutants addressed in this TMDL. Reduction of these pollutants at the upstream boundary of the WA portion of the watershed (ID/Coeur d'Alene Tribe) necessary to meet applicable WQS were presumed in determining loading capacity. The Coeur d'Alene Tribe participated in development of this TMDL and is supportive of this presumption.

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Wasteload Allocations (WLAs)* (including expression of allocations as daily loads)	Yes	X	WLAs for fecal coliform bacteria, temperature and sediment are established in the TMDL as **daily loads** for the point sources which discharge within the watershed. TMDL target reductions may be presented in terms of concentration, load, or both, as allowed under Federal Regulations [40 CFR 130.2(i)] as "other appropriate measures." For fecal coliform bacteria, wasteload allocations are established as **daily loads** (cfu/day) for the point source dischargers (see table ES3, page 16) and apply throughout the year. For temperature, WLAs specify no discharge on a seasonal basis for 4 of the 6 small POWTs in the watershed. The other two POWTs have **daily** maximum temperature limitations identified which are established at the water quality criteria (see table ES5, page 22 and subsequent discussion in submittal). For turbidity and total suspended solids (TSS): Turbidity is simply a measurement of the diffraction of light as it passes through water and is not a pollutant in itself. In this case, the diffraction is caused by sediment suspended in the water. However, the turbidity listings called attention to the serious sediment problems that exist throughout the watershed. WLAs for TSS are identified on page 31, Table ES10. The **daily loads** have been translated into the monthly and weekly average limitations which will be included in the NPDES permits for these dischargers. The TMDL presumes that meeting the loading targets for TSS will also meet criteria for turbidity.

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Load Allocations (LAs)* (including expression of allocations as daily loads)	Yes	X	For fecal coliform bacteria: **daily load** targets are established as concentrations (cfu/day) . For temperature: The TMDL analyses identifies the amount of heat (W/m^2) from solar radiation which would occur during **daily/**seasonal critical conditions were system potential riparian vegetation re-established. This amount of heat represents the loading capacity per WA WQS (when *natural conditions* exceed numeric criteria). However, expressing **daily load** allocation as W/m^2 provides little guidance for implementation activities. Because stream shading by riparian vegetation is the primary function controlling stream heating, Ecology instead established load allocations for riparian shade as a surrogate for the pollutant heat (from solar radiation). For obvious reasons, the riparian shade targets apply as both the **daily** and seasonal load allocations. For sediment and turbidity: Sediment loading into, and transport of sediment through the Hangman Creek watershed is a function of high flow events. High flow events usually occur during periods of spring runoff but are unpredictable on even an annual basis. WA has no numeric criteria for sediment, so sediment loading targets were based on narrative criteria to protect the most sensitive designated aquatic life uses (salmonid fish). The TMDL discusses how the duration and frequency of exposure to sediment loading events affects these fish and sediment targets were set at levels which fish can tolerate. LAs for TSS are established at critical points in the watershed which apply from these points upstream through their respective catchments. These LAs are expressed as both tons/year and percent reductions from current conditions (see page 137, Table 26). Although difficult to measure, the percent reductions targets apply as **daily loads** during sediment loading and transport events associated with high flows. The TMDL presumes that meeting the loading targets for TSS will also meet criteria for turbidity. This presumption will be verified by monitoring during TMDL implementation.

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Margin of Safety (MOS)*	Yes	X	"Inherent" MOS. State used conservative assumptions and critical conditions in water quality analyses for setting pollutant loading targets.
Seasonal Variation*	Yes	X	Seasonal critical conditions used for setting loading targets.
Monitoring Plan for TMDLs under adaptive management	Optional		

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Summary Implementation Strategies Elements under the 1997 MOA (see Part VIII, A) include: 1. Timeframe for meeting water quality standards 2. Approaches to be used to meet load and wasteload allocations, which consider flow and seasonal variations 3. Interim targets, if appropriate, with linkages to the pollution sources 4. Monitoring strategy to measure implementation activities and achievement of interim targets and water quality standards Schedule for monitoring and evaluation of TMDL and implementation effectiveness, including source feedback loops	As agreed upon under the 1997 MOA with EPA	X	
Reasonable Assurances	If WLAs depend on LAs		WLAs not dependent on meeting LAs. MS4 stormwater targets for FC bacteria and sediment may need to be revisited after implementation has progressed enough to evaluate effectiveness of both NPS controls and stormwater BMPs.
Public Participation*	Yes	X	Long development process (several years) with many public meetings and opportunities for public (and Tribal) involvement.

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Other Comments	As necessary		
Recommended Action	Approval	X	

* These elements are required by statute and implementing regulations.